

REVASCAT and SWIFT PRIME, demonstrated a reduction in the rate for sICH of the THERAPY cohort to as low as 0.0% for the intervention arm (Table 1).

Conclusion Under the trial definition, any apparent extravascular blood in the brain or cranium with an increase of 4 or more on the NIHSS, associated or not, is considered a sICH; as a result, the inclusion of hemorrhagic infarctions (HI1 and HI2) in this definition resulted in an apparent relative increase in sICH rates. Subjecting the THERAPY cohort to other definitions yielded notable variance in complication rates. As there is no current standardization for the quantification of sICH, further analysis and data are needed to identify and standardize a succinct and relevant definition.

Disclosures R. von Kummer: 2; C; Penumbra, Inc. D. Frei: 3; C; Penumbra, Inc. A. Yoo: 1; C; National Institute of Health, Penumbra, Inc., Remedy Pharmaceuticals. O. Zaidat: 6; C; Penumbra, Inc. P. Khatri: 1; C; Penumbra, Inc. R. Gupta: 6; C; Penumbra, Inc. D. Lopes: 6; C; Penumbra, Inc. H. Shownkeen: None. D. Meyer: 5; C; Penumbra, Inc. H. Buell: 5; C; Penumbra, Inc. V. Bach: 5; C; Penumbra, Inc. S. Kuo: 5; C; Penumbra, Inc. A. Bose: 4; C; Penumbra, Inc. 5; C; Penumbra, Inc. S. Sit: 4; C; Penumbra, Inc. 5; C; Penumbra, Inc. J. Mocco: 1; C; Penumbra, Inc.

0-012 EMERGENT ENDOVASCULAR MANAGEMENT OF LONG-SEGMENT CAROTID ARTERY DISSECTIONS IN ACUTE ISCHEMIC STROKE INTERVENTION WITH MULTIPLE TANDEM STENTS

¹S Ansari, ²A Kuhn, ³A Honarmand, ⁴S Hou, ⁵M Khan, ²J Chueh, ²I van der Bom, ¹M Hurley, ¹A Shaibani, ²M Gounis, ¹M Potts, ¹B Jahromi, ²A Wakhloo, ²A Puri. ¹Radiology and Neurological Surgery, Northwestern University Feinberg School of Medicine, Chicago, IL; ²Radiology, University of Massachusetts, Worcester, MA; ³Radiology, Northwestern University Feinberg School of Medicine, Chicago, IL; ⁴Stroke and Neurovascular center of Central California, Santa Barbara, CA; ⁵Neurology, University of Massachusetts, Worcester, MA

10.1136/neurintsurg-2016-012589.12

Background and purpose Cervical dissections are a significant cause of acute ischemic stroke, especially in young and middle aged adults. Although medical management of cervical dissections is standard treatment, emergent endovascular treatment may become necessary in the presence of acute intracranial large vessel occlusions, flow limiting and long segment lesions with impending occlusion, and/or ischemia at risk for cerebral infarction. We report our experience with the endovascular reconstruction of long segment carotid dissections using multiple tandem stents in acute ischemic stroke intervention.

Materials and methods We retrospectively studied patients with carotid artery dissections requiring stent reconstruction at our institutions between January 2011 and January 2015, presenting with acute (<12 hours), severe ischemic stroke symptoms (NIHSS >4), and requiring carotid reconstruction with multiple tandem stents (≥3 stents). We analyzed patients' demographics, vascular risk factors, presentations, imaging and angiographic findings, technical efficacy and safety, and clinical outcomes.

Results We identified 15 patients presenting with acute ischemic stroke that underwent endovascular stent reconstruction of carotid dissections for vessel and/or ischemic tissue salvage. Mean patient age was 51.5 years with a mean presenting NIHSS of 15 and discharge NIHSS of 6. All carotid

dissections presented with >70% stenosis and severe flow limitation, nearly all 14/15 involving the distal cervical segment of the ICA with a minimum length of 3.5 cm. Technical success of carotid stent reconstruction was achieved in all patients (100%) with no significant residual stenosis or flow limitation. Nine patients (60%) harbored simultaneous intracranial occlusions, and 6 patients (40%) required IA thrombolysis/thrombectomy achieving TICI 2 b-3 reperfusion in all 15 patients. There were no symptomatic intracranial hemorrhages. Procedural complications were limited to distal thromboemboli and multifocal infarcts in a single patient due to suspected in-stent thrombus, resulting in 7% procedural morbidity and 0% mortality. Follow-up 3–6 month angiographic and ultrasound imaging evaluations confirmed normalization of carotid artery caliber and stent patency in 12/14 patients, with 2 cases of only mild persistent vessel irregularity and <20% in-stent stenosis. On clinical follow-up, 9/15 (60%) of patients achieved mRS ≤ 2 at 90 days, with no interval recurrent TIAs or strokes.

Conclusion Tandem stent reconstruction for the treatment of long segment and flow limiting carotid dissections is technically safe and effective with favorable clinical outcomes in acute ischemic stroke intervention, allowing for successful thrombectomy, vessel salvage, restoration of cerebral perfusion, and prevention of recurrent thromboembolic stroke.

Disclosures S. Ansari: None. A. Kuhn: None. A. Honarmand: None. S. Hou: None. M. Khan: None. J. Chueh: None. I. van der Bom: None. M. Hurley: None. A. Shaibani: None. M. Gounis: None. M. Potts: None. B. Jahromi: None. A. Wakhloo: None. A. Puri: None.

0-013 HYPERTENSION DECREASES THE NUMBER AND DURATION OF COLLATERAL OPENINGS DURING MIDDLE CEREBRAL ARTERY OCCLUSION (MCAO) AND IMPAIRS REPERFUSION

M Cipolla, J Sweet, K Chan. *Neurological Sciences, University of Vermont, Burlington, VT*

10.1136/neurintsurg-2016-012589.13

Introduction Hypertension is associated with large ischemic cores and little penumbral tissue that is thought to contribute to poor outcome from ischemic stroke. Pial collaterals (leptomeningeal anastomoses; LMA) are thought to perfuse the penumbra during MCAO by promoting retrograde flow from the anterior cerebral artery (ACA) to the MCA territory. We recently demonstrated that pial collaterals are vasoconstricted in spontaneously hypertensive rats (SHR) that likely contributes to poor collateral flow and increased infarction. Here, we developed methodology to measure collateral openings in SHR (n = 6) compared to normotensive Wistar (n = 6) rats during MCAO. We hypothesized that SHR have fewer collateral openings and/or shorter duration openings during MCAO, and impaired reperfusion.

Materials and methods Dual laser Doppler probes were used to simultaneously measure changes in relative cerebral blood flow (rCBF) in the MCA (probe 1: Bregma -2, lateral +4) and ACA collateral (probe 2: Bregma +2, lateral +3) vascular territories during 2 hours of MCAO by filament occlusion (Figure 1). Collateral openings were defined as increased collateral flow that did not correspond to changes in blood pressure. The number and duration of collateral openings were quantified off rCBF tracings blinded to group. Animals were